

Chem 1301A (Fall 2021–22)

Discovering Chemical Structure

Welcome to Chem 1301A! Please read and keep this course outline handy, because it is an official document that contains important course information.

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Course Description & Prerequisite Requirements

Calendar description: *An introduction to the foundational principles of chemical structure and properties, emphasizing their relevance to modern science. Topics include: atomic structure, theories of chemical bonding, structure and stereochemistry of organic molecules, and structure of coordination complexes.*

Extra information: 3 lecture hours, 1.5 laboratory hours (3 h every other week), 0.5 course. In-person.

Prerequisite: Grade 12U Chemistry or equivalent. Antirequisites: Chem 1024A/B.

Unless you have either the prerequisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

Students repeating the course must repeat the lab component. There are no exemptions.

Some Important Dates

Date	Event
Wednesday, September 8	First Mastering Chemistry assignment available for completion and is due at 9:00 am on Wednesday, September 22.
Wednesday, September 15	In-class Pre-Test based on high-school chemistry
Thursday, September 16 ("Add deadline")	Last day to make registration changes, such as lecture and lab sections. This is the last day to de-register from a fall-term or full-year course and remove it from your academic record.
Sunday, September 19	Online assignment on administrative matters due by 11:55 pm
Monday, September 20	Deadline to enroll in the Hayden-McNeil lab course
Week of September 27	First week of laboratory rotations
Saturday, October 2	In-person October Quiz (10:00–11:00 am). Room assignments will be posted on OWL under <i>PostEm</i> .
Saturday, October 30	In-person Midterm Test (7:00–9:00 pm). Room assignments will be posted on OWL under <i>PostEm</i> .
Friday, November 12 ("Drop deadline")	Last day to drop a fall-term course without academic penalty. If you drop the course on or before this date, it will be shown on your academic record as WDN (withdrawn). Dropping after this date will result in a WDF, which counts as an F.

Course Website

News and course updates will be posted on Western's learning management system, OWL (<http://owl.uwo.ca>). This is the primary method by which information will be disseminated to all students in the class, so you are responsible for checking OWL on a frequent basis.

If you need technical assistance with OWL, seek support on the OWL Help page. Alternatively, contact the Western Technology Services Helpdesk by phone at 519-661-3800.

Learning Expectations

The course has an emphasis on the development of skills such as critical thinking, problem solving, and quantitative reasoning; these “professional skills” are essential to success in not just chemistry but also in other courses and in many occupations. A student receiving credit for Chem 1301A will be expected to demonstrate competence in their ability to:

Course-Specific Expectations	Professional-Skill Expectations
Describe the importance of chemistry in everyday life and the interdisciplinary nature of chemistry.	Analyze and critically assess problems, and take a systematic approach to solve them.
Use critical thinking skills to explain, make connections between, and apply chemical principles, laws, and theories pertaining to fundamental chemistry, atomic theory, molecular shape & structure, and the various properties of matter.	Work independently, as well as with others in an effective, practical, social, and ethical manner.
Evaluate and assess chemical data and explain how they relate to chemical theories/laws.	Obtain, evaluate, and integrate information from various sources, and determine its relevance.
Apply chemical theories or laws to solve a variety of new qualitative and quantitative chemical problems.	Prioritize tasks and manage the use of time.
Conduct experiments and draw conclusions from collected experimental data and results.	Execute mathematical calculations accurately.
Safely use a variety of laboratory equipment and instrumentation to perform experimental procedures and explain the underlying theory behind all of them.	Communicate thoughts, ideas, and observations verbally and in writing.
	Recognize when to seek assistance.
	Develop respect for, and comply with, regulations and policies.
	Accept responsibility for their decisions, actions, and inactions.

Course Personnel and Email

Throughout the term, four course instructors, a lab coordinator, an undergraduate assistant, a counselling assistant, and several dozen teaching assistants contribute to the course. They are here to support your learning and help you achieve your goals.

Instructors and	Felix Lee*	NS 145	MWF 8:30–9:20
Class Locations/Times	Christina Booker	NS 145	MWF 9:30–10:20
*course coordinator	Paul Ragogna (PJR)	NS 145	MWF 12:30–1:20
	John Corrigan	NS 145	MWF 1:30–2:20

Lab Coordinator	M. Naeem Shahid
Undergraduate Assistant	Lauren Turner
Counselling Assistant	Madison Watson

There is one common email for the course:

chem1301@uwo.ca

Email should only be used for administrative purposes. Emails are triaged during regular business hours and answered in the order of importance. To allow the Chem 1301A team to respond to administrative concerns as quickly as possible, please do not send emails containing:

- Questions about course material or on how to do a particular problem in the workbook. Such questions should be taken to the Resource Room or posted on the OWL forum.
- Questions that can be answered based on the information found in this course outline.
- Requests for grade increases, extra assignments, make-up labs, or similar.

If you email us, you **must use your Western email address and include *Chem 1301A* in the subject line**. Messages from a non-Western account or those that do not include *Chem 1301A* may be blocked by the university's anti-spam system. Including your student number would be useful.

Constructive feedback is valuable to us. Please do not hesitate to contact us if you have any comments or feedback on any aspect of Chem 1301A. We are always trying to improve the course so that we can improve your experience!

Your Western email ends in
@uwo.ca.

Do not use Gmail, Hotmail, Rogers, Yahoo, etc. for anything in Chem 1301A. You must use your Western email.

Resource Room

The Resource Room, located in MSA 1205, provides you with an informal environment for you to ask questions related to lecture material and obtain assistance on practice problems. Group work and peer-to-peer support are strongly encouraged.

During scheduled hours, which will be posted on OWL, the Resource Room will be staffed by a highly qualified teaching assistant. We may also have virtual Resource Room hours depending on the COVID-19 situation.

Common Concerns

The table below provides a list of common student concerns and how they are to be addressed. If your concern is not listed here, please contact the instructor for your section.

Concern	How to Address Concern
All lab-related matters	Visit the lab coordinator, Dr. Naeem Shahid, in MSA 1235. If the coordinator is unable to resolve your concern, appeal in writing by email to Dr. Ragogna at chem1301@uwo.ca.
My test/exam mark on OWL does not agree with the mark that I had calculated.	The discrepancy is often due to an error that you have made in filling in the Scantron bubbles. The Scantron machine does not make errors when reading your Scantron. If you still wish to view your Scantron, download (from OWL), complete, and send the request form to chem1301@uwo.ca no later than two weeks after the release of your mark.
I need help with the course material.	The Resource Room and the OWL forums are your primary source of help. Course instructors will have student hours, scheduled by appointment, but they should be used for all matters other than course material itself.

Course Materials

All of the materials below are required and can be found at the Western Bookstore in the UCC.

Chemistry 1301A Course Workbook, 2021–22 edition

- Classes, tests, and exams will be based on this year's edition. Classes are designed to help you understand material from the workbook and develop problem-solving skills. To obtain the maximum benefit from the workbook and from the classes, it is recommended that you read the relevant topics before coming to class.

Chemistry 1301A Laboratory Manual and Past Exams, 2021–22 edition

- Old editions may not be used. Students must bring the current edition to every experiment. The lab manual contains an access code for a Hayden-McNeil course, which will be used for lab submissions.
- **To complete your first lab on time, you must enroll in the Hayden-McNeil course (using your Western email address) by September 20.** This allows time for your account to be linked to your lab section.

Lab coats

- For your safety, a proper lab coat is required. Scrubs or “consultation coats” are not lab coats and are not acceptable, because they are too short, do not offer enough protection to the upper body, or are not sufficiently fire-resistant.
- You are welcome to purchase it elsewhere or bring one that you already own. Past students have brought one from a place that they worked at, the Ontario Science Centre, etc. The lab coat can be of any colour and even tie-dyed!

Safety glasses

- Safety glasses are included with the purchase of the laboratory manual. Redemption details will be posted on OWL.

Mastering Chemistry access code

- Note that this is separate from the code in the lab manual. The code in the lab manual is for the submission of lab reports. The Mastering Chemistry code is for the online assignments.
- The code is valid for two terms, so an additional purchase for Chem 1302B will not be needed.

Molecular model kit, by Darling Models

- Other model kits may be used, but we highly recommend this kit for its ease of use.

Web-enabled device (phone, tablet, laptop, etc.) for the iClicker component

Sharp EL-510R, EL-510RN, EL-510RT, or EL-510RTB scientific calculator

- To ensure fairness to everyone in the course, only the Sharp EL-510R, EL-510RN, EL-510RT, and EL-510RTB calculator models are permitted in the labs and during tests and exams. All other brands and Sharp models will be confiscated. Proctors and instructors for tests and exams do not lend calculators. It is your responsibility to bring the correct calculator and to ensure that it is in proper working order. It is a good idea to bring a spare calculator of the same model. Obviously, you will not be allowed to share calculators during tests and exams.

Class Topics

Workbook Chapter	Class Topic	Approx # of Classes
	Welcome	1
1	Self-Study Concepts <ul style="list-style-type: none"> This will not be on tests or the final exam, but key concepts will be on the first Mastering Chem assignment and on lab reports. 	0
	Pre-Test (based on high-school chemistry)	1
2.1	Atomic Theory <ul style="list-style-type: none"> Atomic structure, orbitals, electron configuration 	3
2.2	Periodic Properties	1
3.1	Ionic and Covalent Bonding <ul style="list-style-type: none"> Lewis structures, resonance, bond polarity 	4
3.2	VSEPR Theory <ul style="list-style-type: none"> Shapes and polarity of molecules 	2
3.3	Intermolecular Forces	1
3.4	Valence Bond Theory <ul style="list-style-type: none"> Hybridization and formation of σ and π bonds 	2
3.5	Molecular Orbital Theory	2
4	Transition Metals <ul style="list-style-type: none"> Coordination complexes and crystal field theory 	2
5.1	Functional Groups and IR Spectroscopy	2
5.2	Alkanes and Cycloalkanes <ul style="list-style-type: none"> Constitutional isomerism and conformations <i>cis/trans</i> isomerism of substituted cycloalkanes 	3
5.3	Alkenes and Alkynes <ul style="list-style-type: none"> <i>cis/trans</i> isomerism and <i>E/Z</i> nomenclature of alkenes 	2
5.4	Chirality <ul style="list-style-type: none"> <i>R/S</i> nomenclature of tetrahedral stereocentres 	2

Lectures will also feature visiting speakers from various sectors. These visitors will present, either in-person or virtually, a short segment of their work to give you a glimpse of chemistry in the real world. Very general questions about these presentations may be on the midterm test and the final exam.

In all of the topics, the primary focus is on the *understanding* and *application* of the concepts. Accordingly tests and exams will be designed to evaluate your comprehension of the material and your ability to apply it to new and different scenarios. Students should not expect questions that simply test your ability to regurgitate memorized facts or substitute numbers into formulas.

Laboratory Information

Section, Schedule, and Location

The laboratory section in which you are registered is the only section that you may attend. The section number can be found on your timetable on Student Centre. For example, a student with the timetable shown below would be registered in section 024.

Term 1 Schedule					
Time	Mon	Tues	Wed	Thurs	Fri
7:30 AM					
8:00 AM					
8:30 AM	CALCULUS 1000A LEC 006	CALCULUS 1000A LEC 006	CALCULUS 1000A LEC 006		CALCULUS 1000A LEC 006
9:00 AM	WSC-55	WSC-55	WSC-55		WSC-55
9:30 AM	CHEM 1301A LEC 002		CHEM 1301A LEC 002		CHEM 1301A LEC 002
10:00 AM	NCB-101		NCB-101		NCB-101
10:30 AM		BIOLOGY 1001A LEC 201		BIOLOGY 1001A LEC 201	
11:00 AM		NCB-101		NCB-101	
11:30 AM					
12:00 PM					
12:30 PM	GEOGRAPH 1500F LEC 001		GEOGRAPH 1500F LEC 001	GEOGRAPH 1500F LEC 001	
1:00 PM	WSC-55		WSC-55	WSC-55	
1:30 PM	PHYSICS 1301A LEC 001		PHYSICS 1301A LEC 001		PHYSICS 1301A LEC 001
2:00 PM	WSC-55		WSC-55		WSC-55
2:30 PM		CHEM 1301A LAB 024			
3:00 PM					
3:30 PM	PHYSICS 1301A LAB 004			BIOLOGY 1001A LAB 009	
4:00 PM					
4:30 PM					
5:00 PM					
5:30 PM					
6:00 PM					
6:30 PM					
7:00 PM					
7:30 PM			INTEGSCI 1000Z LEC 001		
8:00 PM			P&AB-34		
8:30 PM					
9:00 PM					
9:30 PM					

CHEM 1301A
LAB 024

The date on which you will be doing your lab depends on your lab section. Every course has its own lab schedule, so do not assume that if another course does not have a lab during a certain week, then this course does not have one either. Missed labs will result in a mark of zero unless academic consideration has been granted. There are no labs on the week of November 1st.

Experiment	Lab section ends in 1, 3, or 5	Lab section ends in 2, 4, or 6
Lab Practices	Week of September 27 th	Week of October 4 th
Synthesis	Week of October 11 th	Week of October 18 th
Carbonates	Week of October 25 th	Week of November 8 th
Qualitative Analysis	Week of November 15 th	Week of November 22 nd

There are five possible locations where your lab may be held: Materials Science Addition 1220 zones A, B, C, and D; and Chemistry Building 110. **The location where you will be performing your labs will be posted on OWL PostEm by the evening of Friday, September 24.** It will not be on your timetable on Student Centre.

Lateness Policy

Any student who arrives after the doors to the lab have closed, when the “TA talk” begins, is considered to be late and will not be permitted to do the experiment. A mark of zero will be assigned for that experiment. No credit will be given for the prelab exercises.

Preparation

Before coming to the first experiment, read the Safety Regulations, Introduction, and Significant Figures sections of the lab manual; read the Lab Practices Experiment; view the relevant materials on OWL; and complete the Safety Contract on the Hayden-McNeil site. **Bring your lab manual and calculator. Proper attire, including safety glasses and lab coat, is required before entering the laboratory.**

Prelab exercises must be completed digitally through the Hayden-McNeil site before you arrive. You will be required to present proof of prelab completion on your laptop, tablet, or phone before entering the lab. Access to the prelab exercises on the Hayden-McNeil site will be available starting on the first Monday of each lab cycle (Sept 27, Oct 11, Oct 25, and Nov 15).

Safety and Dress Code

Western is committed to workplace health and safety, and has strict safety regulations. Lab TAs and staff will remove students who, in their opinion, do not meet the safety requirements or are not prepared, as described below. **These students, and those who arrive late, will receive a zero for the entire experiment, and no credit will be given for the prelab exercise.**

Safety glasses or goggles must be worn whenever you are in the laboratory. Students who wear prescription glasses must wear appropriate safety glasses or goggles over their regular glasses. If you wear contact lenses, you must inform the lab TA. **Due to COVID-19, safety glasses are not available for rent.**

With respect to clothing, Western mandates “shoulder-to-toe” coverage. Details are found in the lab manual. **Shoes, socks, pants, or lab coats are not available for rent.**

Everyone must be wearing a buttoned-up lab coat at all times in the laboratory.

Everyone must wear ankle-length pants, socks that cover the ankle, and shoes that cover the whole foot (top, sides, and back) without any “cutout holes.” Shorts, sandals, and capris are among the items of clothing that are not acceptable. No skin may show at the ankles even when you are seated. Pants with rips or tears, or leggings with mesh panels, are not acceptable.

Submission of Lab Reports

Lab reports, which constitute the data sheet plus the worksheet, will be submitted through the Hayden-McNeil site. They are due one week after your experiment by 10:00 am, 3:00 pm, and 6:30 pm for lab periods that start at 9:30 am, 2:30 pm, and 6:00 pm, respectively. Reports for lab sessions that run the week before Fall Break are due the week after Fall Break. Of course, you are welcome to submit your report at any time before the deadline.

Please note that only one submission attempt is possible for each lab by the due date. Second-attempt requests will not be granted without academic consideration obtained either through SRA or an academic counsellor.

Evaluation

Components

Tests and exams are necessary to assess your mastery of core concepts. Your overall course grade out of 100 will automatically be the *higher* of the two grades calculated by the two methods shown below. Listed next to the respective components are their maximum contributions toward the course grade.

Component	Notes	Method 1	Method 2
Pre-Test	Held in class on Wednesday, Sept. 15, and based on high-school chemistry. As long as you complete the quiz, you will receive one mark regardless of your actual score.	1	same
OWL assignment on administrative matters	Due Sunday, Sept. 19 at 11:55 pm. This activity will help you become familiar with the course and with Western. As long as you obtain at least 90%, you will receive one mark regardless of your actual score. You will have a maximum of five (5) attempts, so you can repeat it a few times until you obtain 90%.	1	same
Mastering Chemistry	9 online assignments. The mark for this component will be calculated from your best 8 assignments.	8	same
iClicker	Marked on participation only. The score you receive will be based on the percentage of questions you answer: At least 80% = 5 70–79% = 4 60–69% = 3 50–59% = 2 40–49% = 1 Less than 40% = 0	5	same
Laboratory	Four experiments (3.00 each)	12	same
October Quiz	Saturday, October 2, 10:00–11:00 am	7	same
Midterm Test	Saturday, October 30, 7:00–9:00 pm	28	14
Final Exam	Scheduled by the Registrar, 3.00 hours	38	52

Requirements for Passing Chem 1301A

To obtain credit for the course, all four requirements below must be met:

1. Obtain a minimum of 50% on the overall course grade.
2. Obtain a minimum of 45% on the Final Exam.
3. Obtain a minimum of 50% on the laboratory component (6.00 out of 12). This mark is calculated from all four experiments. A missed experiment is assigned a mark of zero unless it has been “excused” (see section on Missed Course Components).
4. Miss no more than two experiments, whether excused or not.

Students who fail to meet requirement #2 or #3 will receive a course grade no greater than 40% (even if the calculated course grade is higher) and will not receive credit for the course.

Mastering Chemistry

This online assignment platform helps you increase your understanding of core concepts and problem-solving skills. Completing these assignments independently will help you to master your understanding of the course content.

Registration information to link your account to our course will be posted on OWL. The email address that you use for your Mastering Chemistry account must be your uwo.ca email address. Using any other email address will lead to a mark of zero on this component of the course.

There will be 9 graded assignments, but only the best 8 will be used to calculate your mark on the Mastering Chemistry component of the course. Assignments are due at 9:00 on the Wednesdays indicated below.

Assignment	Available	Due Wed 9:00 am	Topic
1	Sept 8	Sept 22	Lab preparation (review and key concepts from Chapter 1)
2	Sept 22	Sept 29	2.1
3	Sept 29	Oct 6	2.2
4	Oct 6	Oct 13	3.1 and 3.2
5	Oct 20	Oct 27	3.3, 3.4, and 3.5
6	Nov 10	Nov 17	All of Chapter 4
7	Nov 17	Nov 24	5.1 and 5.2
8	Nov 24	Dec 1	5.3 (except E/Z)
9	Dec 1	Dec 8	A bit of everything (exam review)

If you run into any technical issues, please contact Pearson using the contact info provided on OWL and **not** your instructor. It is recommended that you provide yourself with ample time to complete the assignment in the event of technical issues. Specifically, do not wait until the day it is due to start it.

If you believe that there is a content error with a question, please email chem1301@uwo.ca and include the following: the question name/title, a brief explanation of your concern, and a complete screenshot of the question.

iClicker

In order to receive any credit for the iClicker component, you must:

- Create a free iClicker account using your **Western email address**. Please refer to the instructions at <https://presswestern.uwo.ca/> and on OWL. Add your section of Chem 1301A to your iClicker account. If you already have an iClicker account, please go into the settings and verify that it uses your uwo.ca email address.
- Attend, and answer iClicker questions in, the lecture section in which you are registered. Questions answered in the incorrect lecture section will not count towards the total number of questions that you answer.
- If your web-enabled device is not working properly, try refreshing the page or restarting the app. It is your responsibility to ensure that your device is working properly.

Equal Opportunity and Evaluation Policy

We are here to help you achieve your goals. We want you to do well in the course. We were, at one time, students ourselves, so we understand the importance of course grades and the hard work that you will invest into this course.

Most importantly, we also have to be fair. The university is committed to academic integrity and has high ethical and moral standards. All students will be treated equally and evaluated using the criteria presented in this course outline and their respective weights. The evaluation criteria are based strictly on actual achievement, not on effort or how hard the student tried. Claims of an excellent academic history, of attendance in the course components, or of personal issues (family, relationship, financial, etc.) cannot be used to justify a higher grade in the course because they are not criteria for evaluation. There is no extra work available for extra credit or to “make up” another grade. We do not offer any extra assignments, essays, experiments, or other work of any kind to any student.

The requirement for a higher grade in order to, for example, maintain a scholarship, enter a program, or obtain a higher GPA for various reasons, is not a justifiable reason for increasing your grade. If we increased or “bumped” your grade (*i.e.* gave you a grade that you did not legitimately earn), it would be unfair to the other students and also a great disservice to the scholarships and programs who are evaluating all students on the basis of their grades. Please do not ask us for a grade increase.

Academic Policies and Legalities

The website for Registrarial Services is <http://www.registrar.uwo.ca>.

In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individual's official university e-mail address. It is the responsibility of the account holder to ensure that e-mail received from the University at his/her official university address is attended to in a timely manner.

It is university policy that a regularly scheduled class (lecture, lab, or tutorial) takes precedence over tests and exams. Therefore, if another course schedules a test or exam that takes place during your chemistry lecture or lab, the instructor for that course must accommodate you.

Aside from the specified calculator, no other electronic devices (phones, iPods, etc.) may be in your possession during tests and exams, even for timekeeping purposes. They may not be at your test/exam desk or in your pocket. Any student found in possession of these prohibited devices will receive a mark of zero on the test or exam.

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at this website: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf

Audience response systems ("clickers") will be used to provide immediate feedback on your understanding of course concepts. You must use your own clicker account and may not submit responses for any other student. The data collected using the devices will not be used for research purposes without your consent.

Computer-marked, multiple-choice tests and/or exams may be subject to submission for similarity review by software that will check for unusual coincidences in answer patterns that may indicate cheating.

In the event of a COVID-19 resurgence during the course that necessitates the course delivery moving away from face-to-face interaction, all remaining course content will be delivered entirely online synchronously or asynchronously. Details will be provided as needed. The grading scheme will **not** change. Any remaining assessments will also be conducted online as determined by the course instructor.

The October Quiz, Midterm Test, and Final Exam are in-person assessments. In the event that one or more of these assessments need to be conducted online due to COVID-19, they may be conducted using a remote proctoring service. By taking this course, you are consenting to the use of this software and acknowledge that you will be required to provide **personal information** (including some biometric data) and the session will be **recorded**. Completion of this course will require you to have a reliable internet connection and a device that meets the technical requirements for this service. More information about this remote proctoring service, including technical requirements, is available on Western's Remote Proctoring website at: <https://remoteproctoring.uwo.ca>.

How to Achieve Your Goals in Chem 1301A

You will be more successful in the course if you recognize the following:

1. Like many sciences, chemistry is a cumulative subject. Because one topic acts as a foundation for the next, it is essential to stay up-to-date by studying the material and doing practice problems.
2. Learn *why* something is the way it is, not just *what* it is. Recognize that memorization is not the same as learning and understanding. When working on questions from the workbook, focus on the concepts, the thought process, how to arrive at the answer, and why the answer is the answer.
3. Don't just come to class – get something out of coming to class. Be attentive. Participate. Think. Write down important points, but avoid spending so much time writing that you're not thinking.
4. Labs are intended to be an enjoyable experience. Prepare for each lab in advance by reading the lab manual and doing the prelab exercise. Learn the theory and the concepts behind the experiment.
5. Use us – we're here to help! If you have questions about the course material, ask them well in advance. Ask questions at the Resource Room or on the OWL forum as soon as they arise.
6. To assist in learning and understanding, you are encouraged to study in small groups, where you can challenge yourself by defending your work and ideas and also to challenge others.

Support Services

Please visit the Science & Basic Medical Sciences Academic Counselling webpage for information on adding/dropping courses, academic considerations for absences, appeals, exam conflicts, and many other academic related matters: <https://www.uwo.ca/sci/counselling/>.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. You may also wish to contact Accessible Education at 519-661-2147 if you have questions regarding accommodation.

The university's policy on Accommodation for Students with Disabilities can be found here: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic%20Accommodation_disabilities.pdf

The university's policy on Accommodation for Religious Holidays can be found here: http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_religious.pdf

Learning-skills professionals at Learning Development & Success (<https://www.uwo.ca/sdc/learning>) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Students who are in emotional/mental distress should refer to Health and Wellness (<https://www.uwo.ca/health>) for a list of options about how to obtain help.

Additional student-run support services are offered by the USC, <http://westernusc.ca/your-services>.

Student Absences

Students who experience an extenuating circumstance (such as illness or injury) sufficiently significant to temporarily render them unable to meet academic requirements may submit a request for academic consideration through the following routes:

- Submitting a Self-Reported Absence (SRA) form provided that the conditions for submission are met. To be eligible for a Self-Reported Absence:
 - An absence must be no more than 48 hours
 - The assessment must be worth no more than 30% of the course grade
 - No more than two SRAs may be submitted during the Fall/Winter term
- For medical absences, submitting a Student Medical Certificate (SMC) signed by a licensed medical or mental health practitioner to the Academic Counselling office of their Faculty of Registration.
- Submitting appropriate documentation for non-medical absences to the Academic Counselling office in their Faculty of Registration.

Students should also note that individual instructors are not permitted to receive documentation directly from a student, whether in support of an application for consideration on medical grounds, or for other reasons. **All documentation required for absences that are not covered by the Self-Reported Absence Policy must be submitted to the Academic Counselling Office of your home faculty.**

For more information, please consult Western's policy on academic consideration for absences:
https://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf

For the Student Medical Certificate (SMC), please see:
http://www.uwo.ca/univsec/pdf/academic_policies/appeals/medicalform.pdf

Religious Accommodation: When a course requirement conflicts with a religious holiday that requires an absence from the University or prohibits certain activities, students should request accommodation for their absence in writing at least two weeks prior to the holiday to the course instructor and/or the Academic Counselling office of their Faculty of Registration. Please consult University's list of recognized religious holidays (updated annually) at <https://multiculturalcalendar.com/ecal/index.php?s=c-univwo>.

Missed Labs

There are no make-up labs, and it is not possible to reschedule them. If academic consideration has been granted for the missed lab, the lab will be given a mark of EXCU (excused), which shifts the weight of the missed lab onto all of the other labs. If academic consideration has not been granted, the missed lab will be given a zero.

Tests and exams will contain questions related to the theoretical aspects of the experiments. You are responsible for the material pertaining to the missed labs.

Late Lab Reports

If you have received academic consideration for not being able to submit your report prior to the deadline, please email any proof of academic consideration that you may have to chem1301@uwo.ca. The deadline will then be extended, and the lab report will be marked as though it were on time. Late lab reports will not be accepted without academic consideration.

Late Mastering Chemistry Assignments

If you are unable to complete an assignment prior to the deadline, and you have been granted academic consideration, please contact us at chem1301@uwo.ca to request an extension.

Missed Lectures (iClicker Questions)

We understand that you will not be able to attend class from time to time. Therefore, the participation-based iClicker marking scheme was designed to take into account the occasional missed class.

Accordingly, iClicker marks will not be adjusted for the occasional missed class. If you have a long-term absence (three or more consecutive classes) that is supported by academic consideration, then your iClicker marks will be adjusted to take your long absence into account.

Missed Pre-Test, OWL Admin Quiz, or October Quiz

Generally, a missed Pre-Test or OWL Admin Quiz will result in a mark of zero with no opportunity for a make-up. However, if you were not enrolled in the course before these were due, please contact us so that you will receive a participation mark, pending verification of your record and enrollment history.

If you have been granted academic consideration for the October Quiz, its weight will be shifted to the Midterm Test. That is, the value of the Midterm Test would be increased by 7.0 to a new value of 35.

Missed Midterm Test or Final Exam

If you have received academic consideration for the Midterm Test, you will be able to write the make-up on **Saturday, November 13, 7:00–9:00 pm**. If you are unable to write the make-up Midterm Test, the weight of the Midterm Test will be shifted to the Final Exam.

If you are unable to write the Final Exam, contact your faculty's Academic Counselling Office as soon as possible. They will assess your eligibility to write the Special Exam (the name given by the university to a make-up Final Exam) in January of 2022.

You may also be eligible to write the Special Exam if you are in a "Multiple Exam Situation" (see https://registrar.uwo.ca/academics/examinations/exam_conflicts.html).

Frequently Asked Questions

Should I focus on the questions in the workbook, those on Mastering Chemistry, or the questions on the past tests and exams?

All of them – they have very different objectives. Questions in the workbook and on Mastering Chemistry are designed to help you *learn, understand, and apply* chemical concepts. Questions on the past tests and exams in the lab manual are designed to *evaluate* your understanding of, and ability to use, those concepts.

Where are the course personnel?

Instructors	Christina Booker	CHB 21	cbooker2@uwo.ca
	John Corrigan	CHB 16	jfcorrig@uwo.ca
	Felix Lee	MSA 1203	flee32@uwo.ca
	Paul Ragogna (PJR)	BGS 2022	pragogna@uwo.ca
Lab Coordinator	Naeem Shahid	MSA 1235	mshahi32@uwo.ca
Undergraduate Assistant	Lauren Turner	CHB 119	
Counselling Assistant	Madison Watson	CHB 119	

Can you recommend a tutor?

Before considering a tutor, don't forget about the free help in the Resource Room!

Private, third-party review or tutor services are not affiliated with, or endorsed by, the university. As such, the university cannot be responsible for any of the content they provide, even if the content causes you to answer exam questions incorrectly. Because of liability reasons, your instructors are not permitted to suggest or recommend any specific tutors.

Students should realize that they may not hire tutors who are Chemistry 1301A teaching assistants, even if they are not from your own lab section. This is a serious legal matter pertaining to conflict of interest. If you are ever in doubt, please do not hesitate to ask your instructor.

This course is supported by the Science Student Donation Fund. If you are a BSc or BMSc student registered in the Faculty of Science or Schulich School of Medicine and Dentistry, you pay the Science Student Donation Fee. This fee contributes to the Science Student Donation Fund, which is administered by the Science Students' Council (SSC). One or more grants from the Fund have allowed for the purchase of equipment integral to teaching this course. You may opt out of the Fee by the end of September of each academic year by completing paperwork in the Faculty of Science's Academic Counselling Office. For further information on the process of awarding grants from the Fund or how these grants have benefitted undergraduate education in this course, consult the chair of the department or email the Science Students' Council at ssc@uwo.ca.